

1. AMENDMENTS

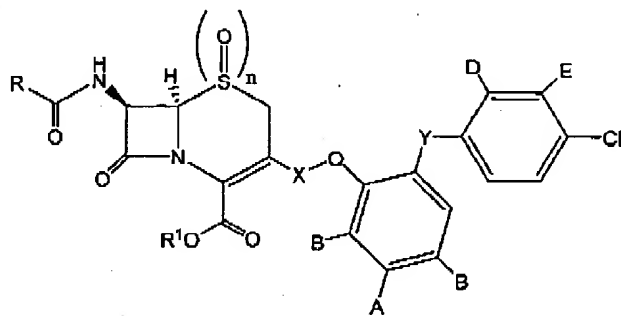
In the claims:

The subject application is a Request for Continuation Examination (RCE) application filed on November 24, 2003. In the RCE, all previously pending claims were canceled and new claims 74 to 101 were added. However, the amendment filed with the RCE failed to conform to 37 C.F.R. § 1.121, as amended. This paper is submitted to correct the deficiencies in the prior amendment.

This listing of claims will replace all prior versions and listings of claims in the subject application.

Claims 1. to 73. (Currently Canceled).

74. (New) A compound having the following structure:



wherein:

n is 0, 1 or 2;

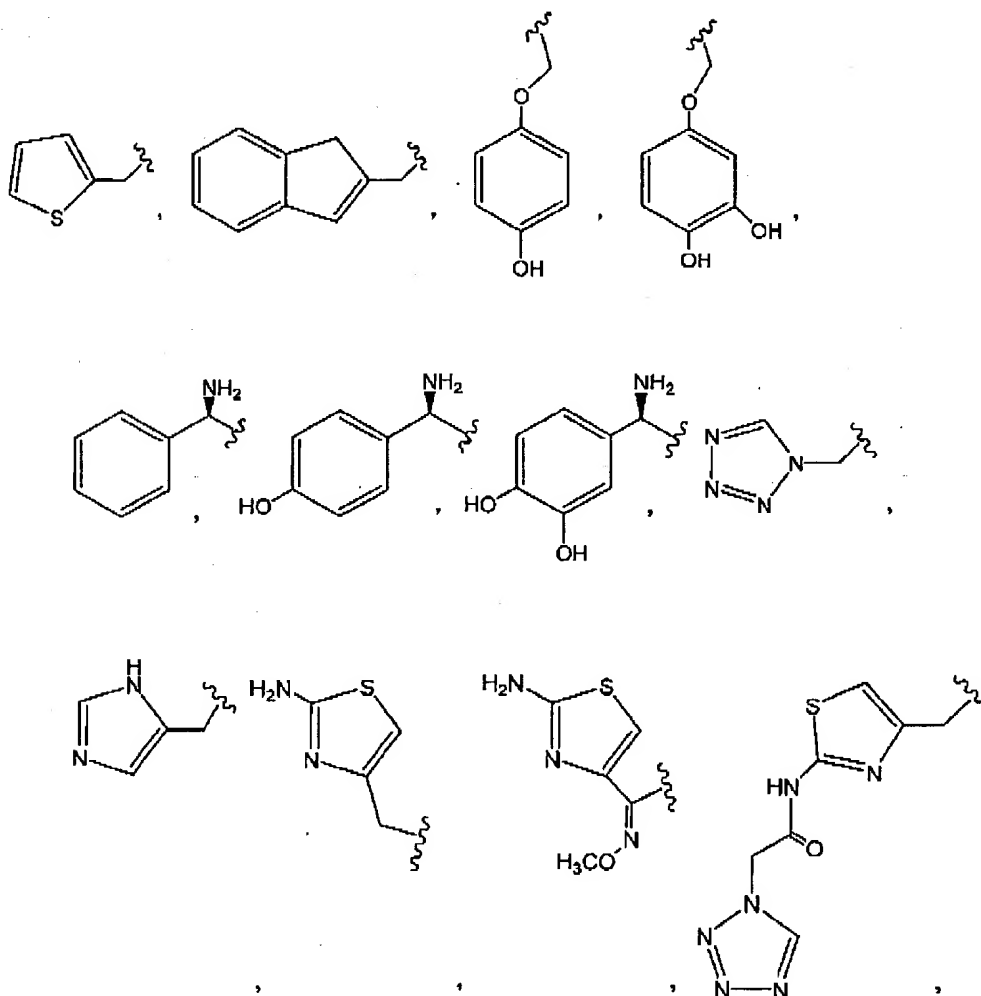
X is selected from the group consisting of CH₂, cis-CH=CHCH₂, trans-CH=CHCH₂, CH₂OC(=O), NHC(=O)O, C≡CCH₂, SO₂, NHCH₂CH₂CH₂NHC(=O) and CH₂C₆H₅OCH₂;

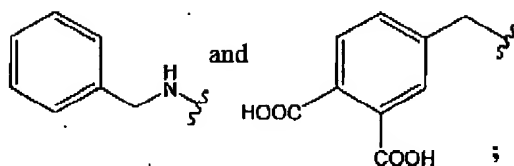
Y is selected from the group consisting of oxygen and C(=O)NH, wherein,

when Y is oxygen, A and D are chlorine and B and E are hydrogen;

when Y is C(=O)NH, B and E are chlorine and A and D are hydrogen;

R is selected from the group consisting of CH₃, HOCH₂CH₂, H₂NC(=NH)NHCH₂CH₂,
HOC(=O)CH₂CH₂, H₂NC(=O)NH, C₆H₅, C₆H₅CH₂, C₆H₅OCH₂ and (PEG)OC(=O)CH₂CH₂,





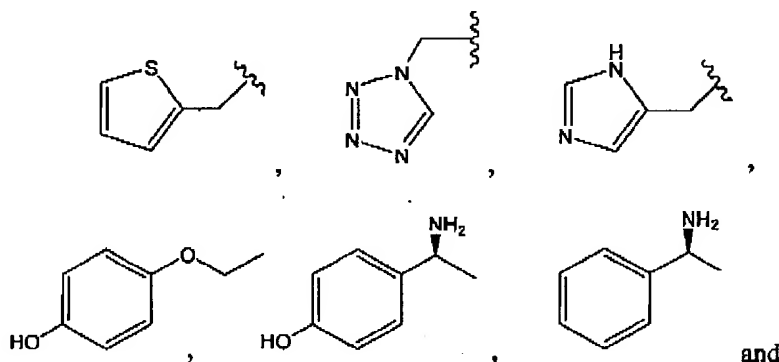
R^1 is selected from the group consisting of hydrogen, Li^+ , Na^+ , $(\text{C}_1 - \text{C}_6)_m\text{N}(\text{H})_{4-m}^+$ and polyethyleneglycolyl, wherein m is 0 – 3.

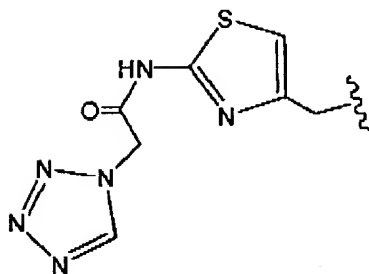
75. (New) The compound of claim 74, wherein n is 0.

76. (New) The compound of claim 75, wherein X is CH_2 .

77. (New) The compound of claim 76, wherein R is selected from the group consisting of:

$\text{NH}_2\text{C}(=\text{NH})\text{NHCH}_2\text{CH}_2$,





78. (New) The compound of claim 74, wherein the compound is 3-(2-(2,4-dichlorophenoxy)-5-chlorophenoxy)methyl-7-(2-thienylacetamido)-3-cephem-4-carboxylic acid (Compound 9).

79. (New) The compound of claim 74, wherein the compound is 3-(2-(2,4-dichlorophenoxy)-5-chlorophenoxy)methyl-7-(1-tetrazoleacetamido)-3-cephem-4-carboxylic acid (Compound 29).

80. (New) The compound of claim 74, wherein the compound is 3-(2-(2,4-dichlorophenoxy)-5-chlorophenoxy)methyl-7-[2-(3*H*-imidazol-4yl)]-acetamido-3-cephem-4-carboxylic acid (Compound 31).

81. (New) The compound of claim 74, wherein the compound is 3-(2-(2,4-dichlorophenoxy)-5-chlorophenoxy)methyl-7-(1-phenyl-2-aminoacetamido)-3-cephem-4-carboxylic acid (Compound 38).

82. (New) The compound of claim 74, wherein the compound is 3-(2-(2,4-dichlorophenoxy)-5-chlorophenoxy)methyl-7-[4-(2-aminothiazole)-yl-2-acetamido]-3-cephem-4-carboxylic acid (Compound 39).

83. (New) The compound of claim 74, wherein the compound is 3-(2-(2,4-dichlorophenoxy)-5-chlorophenoxy)methyl-7-[2-(4-hydroxyphenoxy)acetamido]-3-cephem-4-carboxylic acid (Compound 40).

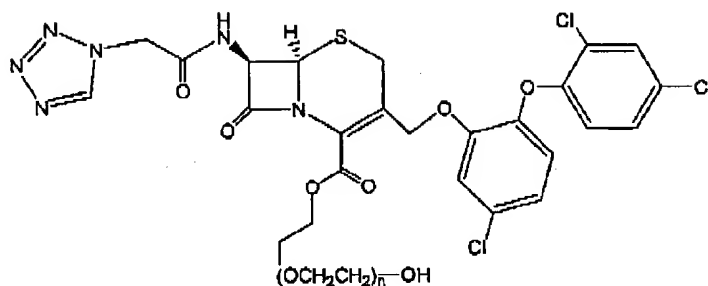
84. (New) The compound of claim 74, wherein the compound is 3-(2-(2,4-dichlorophenoxy)-5-chlorophenoxy)methyl-7-[2-amino-2-(4-hydroxyphenyl)acetamido]-3-cephem-4-carboxylic acid (Compound 41).

85. (New) The compound of claim 74, wherein the compound is 3-(2-(2,4-dichlorophenoxy)-5-chlorophenoxy)methyl-7-(3-guanidinypropyl)acetamido-3-cephem-4-carboxylic acid (Compound 42).

86. (New) The compound of claim 74, wherein the compound is 3-(2-(2,4-dichlorophenoxy)-5-chlorophenoxy)methyl-7-{2-[2-(2-tetrazol-1-yl-acetamido)-thiazol-5-yl]-acetamido}-3-cephem-4-carboxylic acid (Compound 43).

87. (New) The compound of claim 74, wherein the compound is 3-(2-(2,4-dichlorophenoxy)-5-chlorophenoxy)methyl-7-(2-thienylacetamido)-1-oxo-3-cephem-4-carboxylic acid (Compound 11).

88. (New) The compound of claim 74, wherein the compound has the structure:

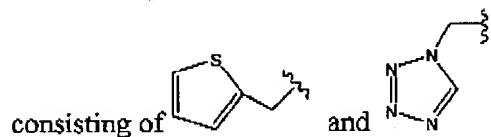


wherein n is 4 to 2000 (Compound 32).

89. (New) The compound of claim 74, wherein X is cis-CH=CHCH₂ or trans-CH=CHCH₂.

90. (New) The compound of claim 89, wherein R¹ is hydrogen.

91. (New) The compound of claim 90, wherein R is selected from the group



92. (New) The compound of claim 91, wherein n is 0.

93. (New) A composition, comprising:

a pharmaceutically acceptable carrier; and,

a compound of claim 74.

94. (New) A method of inhibiting the growth of a microorganism comprising contacting the microorganism with an effective amount of a compound of claim 74.

95. (New) The method of claim 94, wherein the microorganism expresses a β -lactamase.

96. (New) The method of claim 95, wherein the microorganism is selected from the group consisting of *Staphylococcus aureus*, *Staphylococcus epidermidis* and other coagulase-negative staphylococci, *Streptococcus pyogenes*, *Streptococcus pneumoniae*, *Streptococcus agalactiae*, *Enterococcus* species, *Corynebacterium diphtheriae*, *Listeria monocytogenes*, *Bacillus anthracis*, *Neisseria meningitidis*, *Neisseria gonorrhoeae*, *Moraxella catarrhalis*, *Vibrio cholerae*, *Campylobacter jejuni*, *Enterobacteriaceae*, *Pseudomonas aeruginosa*, *Acinetobacter* species, *Haemophilus influenzae*, *Clostridium tetani*, *Clostridium botulinum*, *Bacteroides* species, *Prevotella* species, *Porphyromonas* species, *Fusobacterium* species, *Mycobacterium tuberculosis*, and *Mycobacterium leprae*, with the proviso that when the compound is 3-(2-(2,4-dichlorophenoxy)-5-chlorophenoxy)methyl-7-(2-thienylacetamido)-3-cephem-4-carboxylic acid, the microorganism is not *Pseudomonas aeruginosa*.

97. (New) The method of claim 95, wherein the microorganism is selected from the group consisting of *Staphylococcus aureus*, *Staphylococcus epidermis*, *Enterococcus faecalis* and *Enterococcus faecium*.

98. (New) A method for treating a microbial infection, comprising administering to a subject in need thereof an effective amount of a compound of claim 74.

99. (New) The method of claim 98, wherein the microorganism expresses a β -lactamase.

100. (New) The method of claim 99, wherein the microorganism is selected from the group consisting of *Staphylococcus aureus*, *Staphylococcus epidermidis* and other coagulase-negative staphylococci, *Streptococcus pyogenes*, *Streptococcus pneumoniae*, *Streptococcus agalactiae*, *Enterococcus* species, *Corynebacterium diphtheriae*, *Listeria monocytogenes*, *Bacillus anthracis*, *Neisseria meningitidis*, *Neisseria gonorrhoeae*, *Moraxella catarrhalis*, *Vibrio cholerae*, *Campylobacter jejuni*, *Enterobacteriaceae*, *Pseudomonas aeruginosa*, *Acinetobacter* species, *Haemophilus influenzae*, *Clostridium tetani*, *Clostridium botulinum*, *Bacteroides* species, *Prevotella* species, *Porphyromonas* species, *Fusobacterium* species, *Mycobacterium tuberculosis*, and *Mycobacterium leprae*, with the proviso that when the compound is 3-(2-(2,4-dichlorophenoxy)-5-chlorophenoxy)methyl-7-(2-thienylacetamido)-3-cephem-4-carboxylic acid, the microorganism is not *Pseudomonas aeruginosa*.

101. (New) The method of claim 99, wherein the microorganism is selected from the group consisting of *Staphylococcus aureus*, *Staphylococcus epidermis*, *Enterococcus faecalis* and *Enterococcus faecium*.